

**IN THE CLAIMS:**

Please amend the claims as follows.

Claims 1-16 (canceled)

17. (currently amended) A method of producing a silicon ingot, comprising:

producing a silicon ~~single crystal~~ ingot having ~~growth defects 60% or more GOLC~~  
~~mode yield and being prevented from generation of dislocation clusters~~ under the following  
conditions:

(1)  $1.15 \leq (G1_{edge}/G1_{center}) \leq 1.25$ ;

(2)  $0.5 < (\text{OSF ring inner diameter/crystal diameter}) < 1.06 \times (G1_{edge}/G1_{center})^{-0.2} (G1_{center} \times G2_{center})^{-0.2}$

where

$G1_{center}$  is a temperature gradient in the axial direction at the crystal center in the  
temperature region from the solid-liquid interface temperature to approximately 1350°C and,  
 $G1_{edge}$  is a temperature gradient in the axial direction at the crystal edge in the temperature region  
from the solid-liquid interface temperature to approximately 1350°C, and,  ~~$G2_{center}$  is a~~  
~~temperature gradient in the axial direction at the crystal center near 1120°C~~  
~~— cutting the wafer from portions, of the produced ingot, in which the inner diameter of the~~  
~~OSF ring is at least 1/2 the crystal diameter.~~

18. (currently amended) A method of producing a silicon ingot, comprising the  
steps of:

controlling the  $G1_{edge}$  and, the  $G1_{center}$  and the  ~~$G2_{center}$~~  of the ingot so that:

(1)  $1.15 \leq (G1_{edge}/G1_{center}) \leq 1.25$ ;

Serial No. 09/856,209

$$(2) \ 0.5 < (\text{OSF ring inner diameter/crystal diameter}) < 1.06 \times (G_{\text{edge}}/G_{\text{center}})^{-0.2} (G_{\text{center}} \times G_{\text{center}})^{-0.2}$$

where

$G_{\text{center}}$  is a temperature gradient in the axial direction at the crystal center in the temperature region from the solid-liquid interface temperature to approximately 1350°C and,  $G_{\text{edge}}$  is a temperature gradient in the axial direction at the crystal edge in the temperature region from the solid-liquid interface temperature to approximately 1350°C, and  $G_{\text{center}}$  is a temperature gradient in the axial direction at the crystal center near 1120°C; and  
— cutting the wafer from portions, of the produced ingot, in which the inner diameter of the OSF ring is at least 1/2 the crystal diameter  
— producing a silicon single crystal ingot having 60% or more of GOLL mode yield and being prevented from generation of dislocation clusters.

19. (New) A method of producing a silicon wafer comprising:  
cutting the wafer from portions, of the ingot of claim 18, in which the inner diameter of the OSF ring is at least 1/2 the crystal diameter.

20. (New) A method of producing a silicon wafer comprising:  
cutting the wafer from portions, of the ingot of claim 19, in which the inner diameter of the OSF ring is at least 1/2 the crystal diameter.